2007

Making Life Better

WELCOME TO BRIGHAM CITY

BRIGHAM CITY CORPORATION

Annual Water Quality Report

Based on continued monitoring and testing we are once again pleased to report that our drinking water is in compliance with all Federal and State requirements.

PLEASE ATTEND

Brigham City Council meetings are held on the 1st, 3rd & 5th Thursdays of each month at 7:00 p.m. at 20 North Main Street where topics concerning matters related to Brigham City's water and water projects may be discussed. Public Utility Advisory Board Meeting will be held as needed.

Brigham City Office Hours are 8:00 a.m. to 5:00 p.m.

QUESTIONS

If you have any questions about this report or concerning your water utility please call 435-723-1482.

Water Sources

This Annual Drinking Water Quality report is designed to inform you about the quality of the water and services we deliver to you every day.

Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and to protect our water resources. We are committed to ensuring the quality of your water. Our water sources are a variety of intercity wells and other wells and spring sources located throughout the Mantua Valley.

Brigham City's water distribution system consists of approximately 130 miles of distribution and transmission lines with over 610 fire hydrants and 6,291 water service connections.

Aquifer Project

Brigham City's Aquifer Storage and Recovery Project is in full operation. Aquifer storage and recovery helps replenish and improve the quality of our drinking water in three of our intercity wells. The injection cycle is anticipated to go from October 2007 through April 2008. The quantity of water injected during this period will be over 600 million gallons. If you have any questions concerning our ASR Program please feel free to contact Brigham City Water Division. We are happy to help in any way possible.

Constituents

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or are man made. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants.

Safe Drinking Water Hotline

The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at: 1-800-426-4791.

WHAT IS IN YOUR WATER?

Brigham City routinely monitors for contaminants in your drinking water in accordance with Federal and Utah State regulations. The following table shows the detection of the following constituents in your water for the period of January 1st to December 31st, 2007.

CONSTITUENT TABLE

CONTAMINANT	VIOL. Y/N	LEVEL DETECTED	UNIT MEAS.	MCLG	MCL	SAMPLE DATE	LIKELY SOURCE OF CONTAMINATION
MICROBIOLOGICAL CONTAMINANTS							
Total Coliform Bacteria	N	ND	Presence of coliform bacteria in 5% of monthly samples			2007	Naturally present in the environment
The quality of our drinking water is extremely important to us. We, at the Brigham City Water Division, go above and beyond in our efforts to ensure safe drinking water to you our valued customers. In the calendar year of 2007 the Utah Division of Drinking Water, along with EPA required our city to pull **180** bacteria and coliform samples. In order to ensure safe, dependable drinking water to our customers, we pulled a total of **533** bacteria and coliform samples during the calendar year of 2007. This equates to **353** more samples pulled than required by our regulatory agencies. We pulled an average of **44.4** samples per month throughout our drinking water distribution system. Out of these **533** samples pulled, there were **0** coliform present.							
Turbidity (Ground Water)	N	0	NTU	N/A	5	2007	Soil runoff
RADIOLOGICAL CONTAMINANTS							
Alpha emitters	N	ND	pCi/1	0	15	2007	Erosion of natural deposits
INORGANIC CONTAMINANTS							
Arsenic	N	ND	ppb	0	10	2007	Erosion of natural deposits, runoff from orchards, runoff from glass and electric production wastes
Barium	N	63	ppb	2000	2000	2007	Discharge of drilling wastes, discharge from metal refineries, erosion of natural deposits
Chromium	N	4	ppb	100	100	2007	Discharge from steel and pulp mills, erosion of natural deposits
Copper—90% results	N	180	ppb	1300	AL=1300	2007	Corrosion of household plumbing systems, erosion of natural deposits
Fluoride	N	ND	ppb	4000	4000	2007	Erosion of natural deposits, water additive which promotes strong teeth, discharge from fertilizer and aluminum factories
Lead—90% results	N	3	ppb	0	AL=15	2007	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen)	N	600-1300	ppb	10000	10000	2007	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion of natural deposits
Selenium	N	600	ppb	50	50	2007	Discharge from petroleum and metal refineries, erosion of natural deposits, discharge from mines
Sodium	N	9	ppm	None set by EPA	20	2007	Erosion of natural deposits, discharge from refineries and factories, runoff from landfills.
Total Dissolved Solids (TDS)	N	229	ppm	2000	2000	2007	Erosion of natural deposits

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections.

These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the **Safe Drinking Water Hotline (800-426-4791).**

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Table Definitions

In the table to the left, you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms, we've provided the following definitions:

Non-Detects (ND) - Laboratory analysis indicates that the constituent is not present.

ND/Low - High - For water systems using multiple sources of water, the lowest and highest values detected in all the sources are recorded in the same space in the report table.

Parts per million (ppm) or Milligrams per liter (mg/l) - One part per million corresponds to one minute in two years or a single penny in $10,000.

Parts per billion (ppb) or Micrograms per liter (ug/l) - One part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.

Parts per trillion (ppt) or Nanograms per liter (nanograms/l) - One part per trillion corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.

Picocuries per liter (pCi/L) - Picocuries per liter is a measure of the radioactivity in water.

Millirems per year (mrem/yr) - Measure of radiation absorbed by the body.

Nephelometric Turbidity Unit (NTU) - Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Maximum Contaminant Level (MCL) -The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) - The "Goal" (MCLG) is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Date- Because of required sampling time frames, i.e. yearly, 3 years, 4 years and 6 years, sampling dates "may" seem out of date.

Fluoride

Brigham City injects fluoride into our culinary drinking water to augment dental care. The daily average of fluoride in the water for the year 2007 was 710 ppb (parts per billion). The suggested fluoride range from the American Academy of Pediatrics is a low of 600 ppb with a maximum contaminant level (MCL) not to exceed 4000 ppb. During the 2007 calendar year, the fluoridation system was in operation 96% of the time. The 4% of nonoperation was attributed to equipment maintenance.

Source Protection Plan

In 2007, our spring sources produced 3.2 billion gallons of water, and our culinary wells produced .36 billion gallons. Each source has a state-approved Source Water Protection Plan that defines our water source protection areas. The State Division of Drinking Water has issued Brigham City waivers exempting them from certain chemical testing because these chemicals are not used or stored in areas around our drinking water sources.

Brigham City's Water Sources (Classified as Groundwater Sources)

Wells (Mantua Valley)	Wells (Intercity Wells)	Springs
Mantua East Well	Cemetery Well #1	Rock Spring
Mantua West Well	Cemetery Well #2	East Halling
Peter Jensen Well	Intermountain Well #2	Peter Jensen Spring
	Cooley Well	Birch Spring
		Olsen Spring
		West Halling Spring
		Flat Bottom Canyon

Due to the sources being located in remote and protected areas it has been determined that we have a low susceptibility to contamination from contaminants such as oils, antifreeze, fertilizers, pesticides, etc. If you would like more information regarding the "Drinking Water Source Protection Plan," It is available at the Brigham City Offices, Box Elder County Health Department, Brigham City Library and Brigham City Water Division.

Disinfection

Disinfection of our culinary water supply is by chlorination. Tests results for chlorine residuals range between .31 ppm to .68 ppm. Chlorination helps control microbiological contaminants (Total Coliform / Fecal Coliform) which are monitored regularly throughout the Brigham City Culinary Water Distribution System.

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Designed By R.W.A.U

WATER CONSERVATION TIPS

WELCOME TO BRIGHAM CITY

BRIGHAM CITY CORPORATION

20 North Main
Brigham City, UT 84302

PHONE:
435-723-1482

WEBSITE:
www.brighamcity.utah.gov

Water conservation measures are an important first step in protecting our water supply. Such measures not only save the supply of our source water, but you can also save money by reducing your water bill. Here are a few suggestions.

Conservation measures you can use inside your home include:

- Take shorter showers
- Soak dishes before washing
- Wash only full loads of laundry
- Do not use the toilet for trash disposal
- Run the dishwasher only when full
- Fix leaking faucets, pipes, toilets, etc.
- Replace old fixtures that no longer work properly
- Install water saving devices in faucets & appliances

Here are some ways that you can conserve outdoors as well:

- Water the lawn and garden in the early morning or evening
- Use mulch around plants and shrubs
- Repair leaks in faucets and hoses
- Use water-saving nozzles
- Use water from a bucket to wash your car and save the hose for rinsing

CROSS CONNECTION CONTROL AND BACKFLOW

Cross Connection Control

There are many connections to our water distribution system. When connections are properly installed and maintained, the concerns are very minimal. However, unapproved and improper piping changes or connections can adversely affect not only the availability, but also the quality of the water. A cross connection may let polluted water or even chemicals mingle into the water supply system when not properly protected. This not only compromises the water quality but can also affect your health. So, what can you do? Do not make or allow improper connections at your homes. Even that unprotected garden hose lying in the puddle next to the driveway is a cross connection. The unprotected lawn sprinkler system after you have fertilized or sprayed is also a cross connection. When the cross connection is allowed to exist at your home, it will affect you and your family first. If you'd like to learn more about helping to protect the quality of our water, call us for further information.

WORKING AROUND THE CLOCK

We at Brigham City Water Division work around the clock to provide safe and dependable drinking water to our customers. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.

Please report any suspicious activity to the Water Division by calling 435-723-1482.